

Application No.:
Amendment Dated November 10, 2003
Preliminary Amendment

Attorney Docket No.: FUK-140

REPLACEMENT ABSTRACT

ABSTRACT OF DISCLOSURE

A plasma device which is provided with a container, a gas supply system, and an exhaust system. The container is composed of a first dielectric plate made of a material capable of transmitting microwaves. An antenna for radiating microwaves is located on the outside of the container, and an electrode for holding an object to be treated is located inside the container. The microwave radiating surface of the antenna and the surface of the object to be treated with plasma are positioned in parallel and opposite to each other. A wall section of the container other than that constituting the first dielectric plate is composed of a member of a material having electrical conductivity higher than that of aluminum, or the internal surface of the wall section is covered with the member. The thickness (d) of the member is larger than $(2/\mu_0\sigma)^{1/2}$, where σ , μ_0 and ω respectively represent the electrical conductivity of the member, the permeability of vacuum and the angular frequency of the microwaves radiated from the antenna.